ELSEVIER

Journal of Alloys and Compounds 308 (2000) 323

Journal of ALLOYS AND COMPOUNDS

www.elsevier.com/locate/jallcom

Author Index of Volume 308

Akiba, E., 309
Akiyama, T., 98
Amado, M.M., 49
Amenitsch, H., 250
Ayres de Campos, N., 49

Bażela, W., 56
Behr, G., 193
Bernstorff, S., 250
Bérar, J.F., 172
Bester, G., 1
Bitterlich, H., 193
Blachowski, A., 189
Böhm, H., 30
Börnsen, N., 1
Buddhudu, S., 134
Buschow, K.H.J., 60

Chan, Y.C., 134
Chang, Y.A., 221
Chen, L.X., 104
Cheng, J.X., 163
Chugarov, N.V., 158
Cieślak, J., 189
Corbi, P.P., 153
Cornish, L.A., 205
Costa, B.F.O., 49
Courtois, D., 172
Czakó-Nagy, I., 301

De, P.K., 250
Dennis, K.W., 244
Ding, J., 290
DiSalvo, F.J., 64
Dubiel, S.M., 189

Ellis, P., 205
Endo, T., 109

Fadeeva, V.I., 230
Fähnle, M., 1
Felner, I., 301
Ferid, M., 83
Feutelais, Y., 216
Filoti, G., 21
Fink, J., 193
Fujita, A., 38
Fukamichi, K., 38

Gao, J., 296
Gebel, B., 275
Geng, D.Y., 319
Gervasieva, I.V., 15
Giester, G., 71
Graw, G., 193
Griessen, R., 44
Grigoriev, A.N., 158
Guo, Z.J., 319
Gutfleisch, O., 275

Han, X.Q., 134
Handstein, A., 275
Hanfland, M., 44
Herlach, D.M., 296
Hernandez, R.I., 269
Hernando, A., 21
Hisatsune, K., 269
Hofmann, M., 56, 60
Hohls, J., 205
Hong, H.S., 147
Huang, T.S., 163
Huiberts, J.N., 44
Hurtado, I., 216

Inoue, K., 87
Ivanova, G.V., 15
Iwasaki, K., 109

Jacobs, H., 178
Jin, X.M., 319
Junmin, X., 139

Kam, C.H., 134
Kamegashira, N., 87
Karlsen, O.B., 126
Kbir-Ariguib, N., 83
Kim, J.-H., 259
Kim, W.-J., 237
Kim, Y.S., 147
Kjekshus, A., 126
Klewe, B., 126
Kramer, M.J., 244
Krivoroutchko, K., 230
Kubis, M., 275
Kulik, T., 230
Kulpa, M., 30
Kuncser, V., 21
Kusz, J., 30
Kuzmina, N.P., 158

Lam, Y.L., 134
Lambert-Andron, B., 172
Lankhorst, M.H.R., 280
Le Caër, G., 49
Leciejewicz, J., 56
Lee, H., 259
Lee, J.C., 237
Lee, J.-Y., 259
Lee, P.S., 259
Lee, S.-M., 259
Legendre, B., 216
Lei, Y.Q., 104
Leineweber, A., 178
Li, L., 98
Lin, J.H., 94
Löser, W., 193

Manier, M., 77
Martynenko, L.I., 158
Massabni, A.C., 153
Matyja, H., 230
Mazumder, S., 250
McCallum, R.W., 244
Melnikov, P., 153
Mercurio, J.P., 77
Meyer, B., 1
Miura, E., 269
Mori, T., 87, 115
Moze, O., 60
Müller, K.H., 275
Mushnikov, N.V., 15
Musić, S., 301
Mydlarz, T., 30

Nagengast, D., 44
Nakagawa, T., 121
Nakamura, Y., 309
Navarro, E., 21
Neumann Torgersen, A., 126
Niemann, U., 280
Nowik, I., 301

Ohta, M., 38

Penc, B., 56
Petříček, V., 64
Poduska, K.M., 64
Pontonnier, L., 172
Popović, S., 301
Portnoy, V.K., 230
Principi, G., 21

Rector, J.H., 44
Ristić, M., 301
Rosenberg, M., 21
Russo, U., 21

Saito, F., 121
San Juan, J.M., 216
Schultz, L., 193, 275
Sen, D., 250
Shcherbakova, Ye.V., 15
Shi, Y., 115, 290
Shimada, M., 109
Shiraishi, T., 269
Sousa, J.B., 49
Su, M.Z., 94
Szytuła, A., 56

Takizawa, H., 109
Takuma, Y., 269
Talik, E., 30
Tanaka, T., 115
Tanaka, Y., 269
Tang, Y., 244
Tao, Y., 94
Ternane, R., 83
Tewari, R., 250
Thomas, P., 77
Trabelsi-Ayedi, M., 83

Udoh, K., 269
Uheda, K., 109

Venturini, G., 200
Volkmann, Th., 296

Walle, C., 126
Wang, J., 139
Wang, Q.D., 104
Wang, W., 94
Wang, W.-E., 147
Weiseng, T., 139
Wijngaarden, R.J., 44
Winn, H., 269
Witcomb, M.J., 205

Xiang, Q., 134

Yagi, J.-i., 98
Yakushevich, A.N., 158
Yan, X., 221
Yang, Z., 94
Ye, H., 163
Yeon, J.H., 237
Yi, J.H., 77
Yin, H., 290

Zaitseva, I.G., 158
Zhang, H., 163
Zhang, H.X., 134
Zhang, Q., 121
Zhang, Q.A., 104
Zhang, Z.D., 319
Zhao, X.G., 319
Zhou, Y., 134
Zontone, F., 44
Zukrowski, J., 189

Elsevier Science S.A.
PII: S0925-8388(00)01121-X

ELSEVIER

Journal of Alloys and Compounds 308 (2000) 325–329

Journal of ALLOYS AND COMPOUNDS

www.elsevier.com/locate/jallcom

Subject Index of Volume 308

Ab–initio electron theory
analysis of the electronic structure of intermetallic compounds, and application to structural defects in B2 phases 1
Activation
in-situ X-ray diffraction study on $LaNi_5$ and $LaNi_{4.75}Al_{0.25}$ in the initial activation process 309
$AgFe(SeO_3)_2$
syntheses and crystal structures of the new compounds $BaFe_2(SeO_3)_4$, $AgFe(SeO_3)_2$ and $RbFe(SeO_4)(SeO_3)$ 71
Al–25Si alloy
superplastic deformation behavior of spray-deposited hyper-eutectic Al–25Si alloy 237
Alloys
amalgams for fluorescent lamps. Part I: Thermodynamic design rules and limitations 280
Aluminium bath
enthalpy of formation of the ternary τ' phase in the Al–Cu–Zn system 216
Aluminium copper zinc alloy
enthalpy of formation of the ternary τ' phase in the Al–Cu–Zn system 216
Amino acids
a solid nickel(II) complex with methionine sulfoxide 153
Amorphous
Nd–Fe–B alloys containing NdAu nano particles 244
Amorphous alloys
magnetic phase diagrams of Nb_xFe_{100-x} and Ta_xFe_{100-x} amorphous alloy systems 38
Annealing
effect of titanium on the kinetics of the σ-phase formation in a small grain Fe–Cr alloy 189
Au–Cr–Sn system
the ternary system Au–Cr–Sn and the crystal structure of $Au_{1.15}Cr_2Sn_{8.85}$ 126

$BaFe_2(SeO_3)_4$
syntheses and crystal structures of the new compounds $BaFe_2(SeO_3)_4$, $AgFe(SeO_3)_2$ and $RbFe(SeO_4)(SeO_3)$ 71
Ball milling
magnetic interactions in nanocrystalline FeRh alloys studied by in field Mössbauer spectroscopy 21
Bioinorganic chemistry
a solid nickel(II) complex with methionine sulfoxide 153
Borocarbides
physical properties of a novel rare-earth boron carbide compound $Sc_3B_{0.75}C_3$ 115

Calorimetry
physical properties of a novel rare-earth boron carbide compound $Sc_3B_{0.75}C_3$ 115
Carbides
solid state reactions in Ni–Al–Ti–C system by mechanical alloying 230
Cascade luminescence
photon cascade luminescence of Gd^{3+} in $GdBaB_9O_{16}$ 94
Cerium intermetallic phases
structural and thermopower studies of $CeNiAl_4$- and $CeNiIn_4$-related compounds 64
Chemical synthesis
fabrication of $SrRuO_3$ powders and thin films by metalorganic decomposition 77
phase behavior in the system $La_xSr_{1-x}MnO_{(5+x)/2}$ (x=0.8–1.0) with trivalent state of manganese ion 87
synthesis and electrical properties of $Ba_2Nb_{5-x}Zr_xO_9$ 109
photoluminescence at 1.54 μm in sol-gel-derived, Er-doped $BaTiO_3$ films 134
ferritization of Y^{3+} and Nd^{3+} ions in the solid state 301
Composite
superplastic deformation behavior of spray-deposited hyper-eutectic Al–25Si alloy 237
Crystal growth
constitution and crystal growth of RE_2TMSi_3 intermetallic compounds 193
Crystallite size
in-situ X-ray diffraction study on $LaNi_5$ and $LaNi_{4.75}Al_{0.25}$ in the initial activation process 309
Crystal structure
syntheses and crystal structures of the new compounds $BaFe_2(SeO_3)_4$, $AgFe(SeO_3)_2$ and $RbFe(SeO_4)(SeO_3)$ 71
microstructure and electrochemical behavior of a rapidly solidified $V_3TiNi_{0.56}Hf_{0.24}Mn_{0.15}Cr_{0.1}$ hydrogen storage alloy 104
X-ray and electron diffraction analysis of the structure and the microstructure of the $Y_3(Fe_{0.933}V_{0.067})_{29}$ compound 172
theoretical analysis of occupational ordering in hexagonal interstitial compounds: carbides, nitrides and oxides with "ε-type" superstructures 178
Crystal structure and symmetry
phase behavior in the system $La_xSr_{1-x}MnO_{(5+x)/2}$ (x=0.8–1.0) with trivalent state of manganese ion 87
Crystal structure of $Au_{1.15}Cr_2Sn_{8.85}$
the ternary system Au–Cr–Sn and the crystal structure of $Au_{1.15}Cr_2Sn_{8.85}$ 126
Cycle life
a study on the development of hypo-stoichiometric Zr-based hydrogen storage alloys with ultra-high capacity for anode material of Ni/MH secondary battery 259

Dental alloys
coherent phase diagram of Au–Cu–Pd ternary system near and within the two-phase region of Au_3Cu and AuCu I ordered phases 269
Dielectric properties
synthesis of lead zirconate titanate from an amorphous precursor by mechanical activation 139
Discharge capacity
a study on the development of hypo-stoichiometric Zr-based

Elsevier Science S.A.
PII: S0925-8388(00)01122-1

hydrogen storage alloys with ultra-high capacity for anode material of Ni/MH secondary battery 259
Disproportionation
thermodynamics of the ($Sm_2Fe_{17-x}Ga_x+H_2$) system 275

Electrical resistivity
magnetic properties of $DyMn_2$ single crystals 30
Electric transport
magnetic properties of coarse-grained and nanocrystalline Fe–Cr–Sn alloys 49
Electrochemical impedance spectroscopy
effect of Ni content on the structure, thermodynamic and electrochemical properties of the non-stoichiometric hydrogen storage alloys 163
Electrochemical performance
effect of Ni content on the structure, thermodynamic and electrochemical properties of the non-stoichiometric hydrogen storage alloys 163
Electrochemical reactions
microstructure and electrochemical behavior of a rapidly solidified $V_3TiNi_{0.56}Hf_{0.24}Mn_{0.15}Cr_{0.1}$ hydrogen storage alloy 104
Electrode materials
fabrication of $SrRuO_3$ powders and thin films by metalorganic decomposition 77
mechanochemical synthesis of $La_{0.7}Sr_{0.3}MnO_3$ by grinding constituent oxides 121
Electron diffraction
X-ray and electron diffraction analysis of the structure and the microstructure of the $Y_3(Fe_{0.933}V_{0.067})_{29}$ compound 172
Electronic structure analysis
analysis of the electronic structure of intermetallic compounds, and application to structural defects in B2 phases 1
Electronic transport
synthesis and electrical properties of $Ba_2Nb_{5-x}Zr_xO_9$ 109
physical properties of a novel rare-earth boron carbide compound $Sc_3B_{0.75}C_3$ 115
Energy storage materials
hydrogen storage alloy of Mg_2NiH_4 hydride produced by hydriding combustion synthesis from powder of mixture metal 98
Enthalpy of formation
enthalpy of formation of the ternary τ' phase in the Al–Cu–Zn system 216
Evaporation
synergism by sublimation of volatile lanthanide β-diketonates 158
Exchange interaction
frustrated magnetic behaviour of $TbRh_{1.2}Ru_{0.8}Si_2$ 56

Fe-Mössbauer spectroscopy
magnetic interactions in nanocrystalline FeRh alloys studied by in field Mössbauer spectroscopy 21
Fe–Rh alloy
magnetic interactions in nanocrystalline FeRh alloys studied by in field Mössbauer spectroscopy 21
Ferroelectrics
photoluminescence at 1.54 μm in sol-gel-derived, Er-doped $BaTiO_3$ films 134
Functional materials
amalgams for fluorescent lamps. Part I: Thermodynamic design rules and limitations 280

Ga addition
thermodynamics of the ($Sm_2Fe_{17-x}Ga_x+H_2$) system 275
Gas solid reaction
towards a metallic YH_3 phase at high pressure 44
hydrogen storage alloy of Mg_2NiH_4 hydride produced by hydriding combustion synthesis from powder of mixture metal 98

Heat capacity
physical properties of a novel rare-earth boron carbide compound $Sc_3B_{0.75}C_3$ 115
High pressure
towards a metallic YH_3 phase at high pressure 44
High-temperature alloys
superplastic deformation behavior of spray-deposited hyper-eutectic Al–25Si alloy 237
Hydride formation enthalpy
thermodynamics of the ($Sm_2Fe_{17-x}Ga_x+H_2$) system 275
Hydrogen storage material
microstructure and electrochemical behavior of a rapidly solidified $V_3TiNi_{0.56}Hf_{0.24}Mn_{0.15}Cr_{0.1}$ hydrogen storage alloy 104
Hydrogen storage materials
hydrogen storage alloy of Mg_2NiH_4 hydride produced by hydriding combustion synthesis from powder of mixture metal 98
effect of Ni content on the structure, thermodynamic and electrochemical properties of the non-stoichiometric hydrogen storage alloys 163
Hypo-stoichiometry
a study on the development of hypo-stoichiometric Zr-based hydrogen storage alloys with ultra-high capacity for anode material of Ni/MH secondary battery 259

Index entries
characterization of the vanadium–nitrogen system with nitrogen pressure isobars 147
Infrared spectroscopy
the silver lead apatite $Pb_6Ag_2(PO_4)_6$: hydrothermal preparation 83
In-situ XRD measurement
in-situ X-ray diffraction study on $LaNi_5$ and $LaNi_{4.75}Al_{0.25}$ in the initial activation process 309
Intergrowth structures
orthorhombic $TmGe_{\sim 1.9}$, with a $ZrSi_2$–$ErGe_{1.83}$ intergrowth structure 200
Intermediate valence
structural and thermopower studies of $CeNiAl_4$- and $CeNiIn_4$-related compounds 64
Intermetallic compounds
analysis of the electronic structure of intermetallic compounds, and application to structural defects in B2 phases 1
constitution and crystal growth of RE_2TMSi_3 intermetallic compounds 193
Intermetallics
hydrogen storage alloy of Mg_2NiH_4 hydride produced by hydriding combustion synthesis from powder of mixture metal 98
Interstitial alloys
towards a metallic YH_3 phase at high pressure 44
theoretical analysis of occupational ordering in hexagonal interstitial compounds: carbides, nitrides and oxides with "ε-type" superstructures 178
Interstitial nitrides
magnetic properties of $Sm_2(Fe,Ti)_{17}$ compounds and their nitrides with Th_2Zn_{17} and Th_2Ni_{17} structures 15

Lanthanide β-diketonates
synergism by sublimation of volatile lanthanide β-diketonates 158
Lattice strain
in-situ X-ray diffraction study on $LaNi_5$ and $LaNi_{4.75}Al_{0.25}$ in the initial activation process 309
Lead zirconate titanate
synthesis of lead zirconate titanate from an amorphous precursor by mechanical activation 139
Limited solubility of third component
the ternary system Au–Cr–Sn and the crystal structure of $Au_{1.15}Cr_2Sn_{8.85}$ 126

Liquid quenching
a metastable phase crystallized from undercooled NdFeCoZrGaB alloy droplets 296
Luminescence
photon cascade luminescence of Gd^{3+} in $GdBaB_9O_{16}$ 94
photoluminescence at 1.54 μm in sol-gel-derived, Er-doped $BaTiO_3$ films 134

Mössbauer effect
effect of titanium on the kinetics of the σ-phase formation in a small grain Fe–Cr alloy 189
Mössbauer spectroscopy
magnetic properties of coarse-grained and nanocrystalline Fe–Cr–Sn alloys 49
$CoFe_2O_4$ nanoparticles prepared by the mechanochemical method 290
ferritization of Y^{3+} and Nd^{3+} ions in the solid state 301
Magnetically ordered materials
magnetic phase diagrams of Nb_xFe_{100-x} and Ta_xFe_{100-x} amorphous alloy systems 38
frustrated magnetic behaviour of $TbRh_{1.2}Ru_{0.8}Si_2$ 56
phase behavior in the system $La_xSr_{1-x}MnO_{(5+x)/2}$ (x=0.8–1.0) with trivalent state of manganese ion 87
$CoFe_2O_4$ nanoparticles prepared by the mechanochemical method 290
Magnetic materials
constitution and crystal growth of RE_2TMSi_3 intermetallic compounds 193
Magnetic neutron powder diffraction
chromium sublattice magnetic ordering in a compound of the $ThCr_2Si_2$ type structure: $HoCr_2Si_2$ 60
Magnetic properties
magnetic interactions in nanocrystalline FeRh alloys studied by in field Mössbauer spectroscopy 21
effect of Mn substitution on structure, magnetic properties and magnetostriction of $Sm_{0.9}Pr_{0.1}Fe_2$ 319
Magnetic structure
chromium sublattice magnetic ordering in a compound of the $ThCr_2Si_2$ type structure: $HoCr_2Si_2$ 60
Magnetic susceptibility
magnetic properties of $DyMn_2$ single crystals 30
Magnetisation
physical properties of a novel rare-earth boron carbide compound $Sc_3B_{0.75}C_3$ 115
Magnetization
magnetic properties of $DyMn_2$ single crystals 30
magnetic properties of coarse-grained and nanocrystalline Fe–Cr–Sn alloys 49
synthesis and electrical properties of $Ba_2Nb_{5-x}Zr_xO_9$ 109
$CoFe_2O_4$ nanoparticles prepared by the mechanochemical method 290
ferritization of Y^{3+} and Nd^{3+} ions in the solid state 301
Magnetocrystalline anisotropy
magnetic properties of $Sm_2(Fe,Ti)_{17}$ compounds and their nitrides with Th_2Zn_{17} and Th_2Ni_{17} structures 15
Magnetostriction
effect of Mn substitution on structure, magnetic properties and magnetostriction of $Sm_{0.9}Pr_{0.1}Fe_2$ 319
Mechanical activation
synthesis of lead zirconate titanate from an amorphous precursor by mechanical activation 139
Mechanical alloying
magnetic properties of coarse-grained and nanocrystalline Fe–Cr–Sn alloys 49
mechanochemical synthesis of $La_{0.7}Sr_{0.3}MnO_3$ by grinding constituent oxides 121
solid state reactions in Ni–Al–Ti–C system by mechanical alloying 230
Melt-spun ribbon
Nd–Fe–B alloys containing NdAu nano particles 244
Metals
a thermodynamic analysis of the Cu–Si system 221
Metastable phase
solid state reactions in Ni–Al–Ti–C system by mechanical alloying 230
Methionine sulfoxide
a solid nickel(II) complex with methionine sulfoxide 153
Mn substitution
effect of Mn substitution on structure, magnetic properties and magnetostriction of $Sm_{0.9}Pr_{0.1}Fe_2$ 319

Nanocrystalline
magnetic interactions in nanocrystalline FeRh alloys studied by in field Mössbauer spectroscopy 21
Nanofabrication
$CoFe_2O_4$ nanoparticles prepared by the mechanochemical method 290
Nano-phase
Nd–Fe–B alloys containing NdAu nano particles 244
Nanopowders
synthesis of lead zirconate titanate from an amorphous precursor by mechanical activation 139
Nanostructures
$CoFe_2O_4$ nanoparticles prepared by the mechanochemical method 290
Nd–Fe–B–Au–Cu
Nd–Fe–B alloys containing NdAu nano particles 244
Neutron diffraction
frustrated magnetic behaviour of $TbRh_{1.2}Ru_{0.8}Si_2$ 56
Ni–Al–Ti–C alloys
solid state reactions in Ni–Al–Ti–C system by mechanical alloying 230
Nickel(II)
a solid nickel(II) complex with methionine sulfoxide 153
Nitrogen isobars
characterization of the vanadium–nitrogen system with nitrogen pressure isobars 147
Nonradiative decay
photon cascade luminescence of Gd^{3+} in $GdBaB_9O_{16}$ 94

Optical materials
towards a metallic YH_3 phase at high pressure 44
Optical properties
photon cascade luminescence of Gd^{3+} in $GdBaB_9O_{16}$ 94
Order–disorder effects
theoretical analysis of occupational ordering in hexagonal interstitial compounds: carbides, nitrides and oxides with "ε-type" superstructures 178
Oxide materials
ferritization of Y^{3+} and Nd^{3+} ions in the solid state 301
Oxygen-penetrated layer
a study on the development of hypo-stoichiometric Zr-based hydrogen storage alloys with ultra-high capacity for anode material of Ni/MH secondary battery 259

Phase diagram
the ternary system Au–Cr–Sn and the crystal structure of $Au_{1.15}Cr_2Sn_{8.85}$ 126
characterization of the vanadium–nitrogen system with nitrogen pressure isobars 147
constitution and crystal growth of RE_2TMSi_3 intermetallic compounds 193

solidification phases and liquidus surface of the Al–Ni–Ru system above 50 at.% aluminium 205
a thermodynamic analysis of the Cu–Si system 221
coherent phase diagram of Au–Cu–Pd ternary system near and within the two-phase region of Au_3Cu and AuCu I ordered phases 269
Phase transitions
theoretical analysis of occupational ordering in hexagonal interstitial compounds: carbides, nitrides and oxides with "ε-type" superstructures 178
Precipitates
investigation on precipitation in Zircaloy-2 fuel cladding tube 250

Raman scattering spectroscopy
the silver lead apatite $Pb_8Ag_2(PO_4)_6$: hydrothermal preparation 83
Rare earth alloys
a metastable phase crystallized from undercooled NdFeCoZrGaB alloy droplets 296
Rare earth borate
photon cascade luminescence of Gd^{3+} in $GdBaB_9O_{16}$ 94
Rare earth compounds
frustrated magnetic behaviour of $TbRh_{1.2}Ru_{0.8}Si_2$ 56
Rare earth intermetallic compounds
magnetic properties of $Sm_2(Fe,Ti)_{17}$ compounds and their nitrides with Th_2Zn_{17} and Th_2Ni_{17} structures 15
Rare-earth–transition metal compounds
magnetic properties of $DyMn_2$ single crystals 30
$RbFe(SeO_4)(SeO_3)$
syntheses and crystal structures of the new compounds $BaFe_2(SeO_3)_4$, $AgFe(SeO_3)_2$ and $RbFe(SeO_4)(SeO_3)$ 71
RCr_2Si_2 intermetallic compounds
chromium sublattice magnetic ordering in a compound of the $ThCr_2Si_2$ type structure: $HoCr_2Si_2$ 60
Recombination
thermodynamics of the $(Sm_2Fe_{17-x}Ga_x+H_2)$ system 275
Rietveld method
in-situ X-ray diffraction study on $LaNi_5$ and $LaNi_{4.75}Al_{0.25}$ in the initial activation process 309

SAXS
investigation on precipitation in Zircaloy-2 fuel cladding tube 250
Scaling
investigation on precipitation in Zircaloy-2 fuel cladding tube 250
Scanning and transmission electron microscopy
superplastic deformation behavior of spray-deposited hyper-eutectic Al–25Si alloy 237
Scanning electron microscopy
solidification phases and liquidus surface of the Al–Ni–Ru system above 50 at.% aluminium 205
a metastable phase crystallized from undercooled NdFeCoZrGaB alloy droplets 296
Sigma phase formation
effect of titanium on the kinetics of the σ-phase formation in a small grain Fe–Cr alloy 189
Silver lead apatite
the silver lead apatite $Pb_8Ag_2(PO_4)_6$: hydrothermal preparation 83
Single crystal
magnetic properties of $DyMn_2$ single crystals 30
Sm_2Fe_{17}
thermodynamics of the $(Sm_2Fe_{17-x}Ga_x+H_2)$ system 275
Solid solutions
structural and thermopower studies of $CeNiAl_4$- and $CeNiIn_4$-related compounds 64
Solution calorimetry
enthalpy of formation of the ternary τ′ phase in the Al–Cu–Zn system 216

Spin glasses
magnetic phase diagrams of Nb_xFe_{100-x} and Ta_xFe_{100-x} amorphous alloy systems 38
Spray forming
superplastic deformation behavior of spray-deposited hyper-eutectic Al–25Si alloy 237
Stacking faults
structural and thermopower studies of $CeNiAl_4$- and $CeNiIn_4$-related compounds 64
Strain, high pressure
superplastic deformation behavior of spray-deposited hyper-eutectic Al–25Si alloy 237
Structural defects
analysis of the electronic structure of intermetallic compounds, and appication to structural defects in B2 phases 1
Structure
effect of Mn substitution on structure, magnetic properties and magnetostriction of $Sm_{0.9}Pr_{0.1}Fe_2$ 319
Superplastic
superplastic deformation behavior of spray-deposited hyper-eutectic Al–25Si alloy 237
Synchrotron radiation
towards a metallic YH_3 phase at high pressure 44
Synergistic effect
synergism by sublimation of volatile lanthanide β-diketonates 158

Tau-prime phase
enthalpy of formation of the ternary τ′ phase in the Al–Cu–Zn system 216
TEM
investigation on precipitation in Zircaloy-2 fuel cladding tube 250
Ternary intermetallic phase
the ternary system Au–Cr–Sn and the crystal structure of $Au_{1.15}Cr_2Sn_{8.85}$ 126
Thermodynamic constraints
characterization of the vanadium–nitrogen system with nitrogen pressure isobars 147
Thermodynamic properties
a thermodynamic analysis of the Cu–Si system 221
Thermodynamic property
effect of Ni content on the structure, thermodynamic and electrochemical properties of the non-stoichiometric hydrogen storage alloys 163
Thermodynamics
amalgams for fluorescent lamps. Part I: Thermodynamic design rules and limitations 280
Thermoelectric
synthesis and electrical properties of $Ba_2Nb_{8-x}Zr_xO_9$ 109
Thermopower
structural and thermopower studies of $CeNiAl_4$- and $CeNiIn_4$-related compounds 64
Thin films
fabrication of $SrRuO_3$ powders and thin films by metalorganic decomposition 77
photoluminescence at 1.54 μm in sol-gel-derived, Er-doped $BaTiO_3$ films 134
Thulium germanide
orthorhombic $TmGe_{\sim 1.9}$, with a $ZrSi_2$–$ErGe_{1.83}$ intergrowth structure 200
Ti-xoide film
a study on the development of hypo-stoichiometric Zr-based hydrogen storage alloys with ultra-high capacity for anode material of Ni/MH secondary battery 259
Transition metal alloys
magnetic phase diagrams of Nb_xFe_{100-x} and Ta_xFe_{100-x} amorphous alloy systems 38

magnetic properties of coarse-grained and nanocrystalline Fe–Cr–Sn alloys 49
effect of titanium on the kinetics of the σ-phase formation in a small grain Fe–Cr alloy 189
solidification phases and liquidus surface of the Al–Ni–Ru system above 50 at.% aluminium 205
a metastable phase crystallized from undercooled NdFeCoZrGaB alloy droplets 296
Transition–metal–aluminides
analysis of the electronic structure of intermetallic compounds, and application to structural defects in B2 phases 1
Transmission electron microscopy
coherent phase diagram of Au–Cu–Pd ternary system near and within the two-phase region of Au_3Cu and AuCu I ordered phases 269

Vanadium–nitrogen
characterization of the vanadium–nitrogen system with nitrogen pressure isobars 147

X-ray single crystal diffraction
X-ray and electron diffraction analysis of the structure and the microstructure of the $Y_3(Fe_{0.933}V_{0.067})_{29}$ compound 172
X-ray diffraction
fabrication of $SrRuO_3$ powders and thin films by metalorganic decomposition 77
the silver lead apatite $Pb_8Ag_2(PO_4)_6$: hydrothermal preparation 83
phase behavior in the system $La_xSr_{1-x}MnO_{(5-x)/2}$ (x=0.8–1.0) with trivalent state of manganese ion 87
hydrogen storage alloy of Mg_2NiH_4 hydride produced by hydriding combustion synthesis from powder of mixture metal 98
synthesis and electrical properties of $Ba_2Nb_{5-x}Zr_xO_9$ 109
mechanochemical synthesis of $La_{0.7}Sr_{0.3}MnO_3$ by grinding constituent oxides 121
photoluminescence at 1.54 μm in sol-gel-derived, Er-doped $BaTiO_3$ films 134
effect of Ni content on the structure, thermodynamic and electrochemical properties of the non-stoichiometric hydrogen storage alloys 163
solidification phases and liquidus surface of the Al–Ni–Ru system above 50 at.% aluminium 205
a metastable phase crystallized from undercooled NdFeCoZrGaB alloy droplets 296
ferritization of Y^{3+} and Nd^{3+} ions in the solid state 301
X-ray diffusion
orthorhombic $TmGe_{\sim 1.9}$, with a $ZrSi_2$–$ErGe_{1.83}$ intergrowth structure 200
XRD
synthesis of lead zirconate titanate from an amorphous precursor by mechanical activation 139

Zircaloy-2
investigation on precipitation in Zircaloy-2 fuel cladding tube 250
Zr-based hydrogen storage alloy
a study on the development of hypo-stoichiometric Zr-based hydrogen storage alloys with ultra-high capacity for anode material of Ni/MH secondary battery 259